

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

Claim 1 (currently amended): A method for revascularization, said method comprising the ~~step~~ steps of:

a) choosing a first location on a blood vessel containing blood having a pO_2 of at least 50; and

a) b) forming an extravascular passageway between a said first location on a blood vessel and a second location on a blood vessel, such that said blood having a pO_2 of at least 50 will flow through said extravascular passageway.

Claim 2 (currently amended): The method of Claim 1 wherein said first location and said second location are ~~on at least one blood vessel of~~ in the heart.

By Claim 3 (original): The method of Claim 1 wherein said first location and said second location are on the same blood vessel.

Claim 4 (original): The method of Claim 1 wherein said first location and said second location are on different blood vessels.

Claim 5 (currently amended): The method of Claim 4 wherein said blood vessels are a an artery and a vein.

Claim 6 (original): The method of Claim 4 wherein said blood vessels are a vein and a vein.

Claim 7 (original): The method of Claim 4 wherein said blood vessels are an artery and an artery.

Claim 8 (currently amended): The method of Claim 4 wherein step b comprises forming a plurality of said extravascular passageways are formed between said blood vessels.

Claim 9 (currently amended): The method of Claim 1 wherein ~~said extravascular passageway is formed for the purpose of bypassing~~ step a comprises choosing a location upstream of an obstructed, injured or diseased segment of a blood vessel, and wherein said second location is downstream of the obstructed, injured or diseased segment, such that the blood bypasses the segment.

Claim 10 (original): The method of Claim 1 wherein said first location is on an artery and said second location is on a vein, such that blood will flow from said artery, through said extravascular passageway, and into said vein.

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Claim 11 (currently amended): The method of Claim 10 wherein further comprising a step c) of causing the blood which has entered the vein through said extravascular passageway is subsequently caused to flow in a retrograde direction through said vein so as to retroperfuse tissue through the venous vasculature.

Claim 12 (currently amended): The method of Claim 11 wherein ~~blood is caused to flow through the vein so as to retroperfuse tissue through venous vasculature by; b) step c comprises blocking said vein at a location adjacent said extravascular passageway to cause blood which flows into said vein through said extravascular passageway to subsequently flow through said vein in a direction which will cause said retroperfusion of tissue through the venous vasculature.~~

Claim 13 (original): The method of Claim 1 wherein the extravascular passageway formed in step a b is a primary extravascular passageway formed between a first blood vessel and a second blood vessel such that said blood having a pO_2 of at least 50 will flow from the first blood vessel, through said extravascular passageway, and into the second blood vessel.

Claim 14 (original): The method of Claim 13 wherein said method further comprises the step of:

b c) forming at least one secondary extravascular passageway between said second blood vessel and another blood vessel of the heart such that blood which has entered the second blood vessel through the first extravascular passageway will subsequently flow into another blood vessel through said secondary extravascular passageway.

Claim 15 (original): The method of Claim 14 wherein said blood is caused to flow into the other blood vessel through the secondary extravascular passageway by:

e d) blocking the second blood vessel at a location adjacent the second extravascular passageway to cause said blood to flow from said second blood vessel through said second extravascular passageway and back into said other blood vessel.

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Claim 16 (currently amended): The method of Claim 1 wherein at least one of said first and second locations are is on a blood vessel which is part of a system of blood vessels wherein an obstructed, injured or diseased segment of a blood vessel is present, and wherein step b comprises forming the extravascular passageway so as to deliver the blood to a region that has been deprived of blood because of the obstructed, injured, or diseased segment.

Claim 17 (currently amended): The method of Claim 1 wherein step a b of said method is carried out by:

i) providing a passageway-forming catheter device comprising an elongate flexible catheter body having a tissue-penetrating element passable therefrom so as to penetrate through the wall of a blood vessel in which said catheter body is inserted;

ii) inserting said catheter body into the vasculature and positioning said catheter body such that the tissue-penetrating element is located adjacent the location at which said extravascular passageway is to be formed; and

iii) passing said tissue-penetrating element from said catheter body so as to form said extravascular passageway in accordance with step a of said method.

Claim 18 (original): The method of Claim 17 wherein step i further comprises:

providing an orientation means for locating said first and second locations and for orienting the catheter device such that the tissue-penetrating element of the catheter will pass from said first location to said second location, thereby forming said extravascular passageway between said first location on a blood vessel and said second location on a blood vessel.

19 (original): The method of Claim 17 wherein the tissue penetrating element of the device provided in step i further incorporates a lumen through which a guide wire may be passed upon creation of said extravascular passageway by said tissue-penetrating element, and wherein said method further comprises the step of:

passing a guide wire through said lumen and allowing said guide wire to remain extended through said extravascular passageway following extraction and removal of said catheter, to thereby provide for subsequent advancement of one or more other apparatus through said passageway, over said guide wire.

Claims 20-59 (withdrawn)
